The Jarvis reference does not disclose the use of an extrusion process to manufacture smart cards. Rather, it teaches the use of molding to manufacture the cards. For example, at column 1, lines 23-26, the patent states:

> Smartcards are generally manufactured by a lamination process.
>
> The present invention seeks to provide an improved moulding technique for such articles.

At column 3, lines 1-3, the patent reiterates this teaching, stating that "The card is assembled by means of a moulding process known as reaction injection moulding (RIM)".

During the course of the above-noted interview, the differences between extrusion, as employed in the context of the present invention, and injection moulding, as disclosed in the Jarvis reference, were discussed. Reference was made to the definition of "extrusion" that was supplied with the response filed March 23, 2004. As stated therein, extrusion is a process in which a hot or cold semisoft solid material, such as plastic, is forced through the orifice of a die, to produce a continuously formed piece in the shape of the desired product. In contrast, in the molding technique of the Jarvis patent, preformed elements of the card comprising the electronic components 1 and printed labels 6 are first placed within a mold cavity, which is then filled with a resin, that sets over a fixed time period, e.g. 2 to 10 minutes. After the resin has set, the completed product is removed from the mold.

During the interview, Examiner Lee agreed that the Jarvis reference does not teach an extrusion technique that conforms to the definition provided with the previous response. However, he referred to the website, *dictionary.com*, which

provided two definitions for the term "extrude." One of these definitions is "to shape (a plastic for instance) by forcing it through a die," which is consistent with the definition provided by Applicants and different from the teaching of the Jarvis patent. The other definition is "to push or thrust out." Referring to the embodiment illustrated in Figure 2 of the Jarvis reference, Examiner Lee indicated that it could be interpreted as pushing or thrusting out the printed labels 6 into the mold cavities.

It is respectfully submitted, however, that even if this latter definition is employed for the term "extrude," the Jarvis reference still does not suggest the claimed subject matter. For instance, claim 1 recites the step of "extruding said covering layer immediately in contact with said support sheet." Figure 2 of the Jarvis reference does not suggest that the covering layer 6 is extruded (or pushed) immediately in contact with the support sheet. If one were to interpret the term "support sheet" to encompass the electronic package 1 shown in Figure 2, it can be seen that the labels 6 are not in immediate contact with this element structure. Rather, they are spaced from the electronics, to provide room for the resin.

Alternatively, as suggested in the Office Action, the combination of the resin and the copper layer 7 could be interpreted as a "support sheet." Even under this interpretation, however, the reference still does not meet the requirements of the claim. In the procedure disclosed in the Jarvis reference, the printed labels 6 are first placed into the mold cavity, and the liquid resin is then injected. As such, one could not say that the labels are extruded (or pushed) immediately in contact with the support sheet. In fact, the resin does not form a "sheet" until it has set in the mold for the fixed period of time.

Accordingly, regardless of the manner in which the Jarvis reference is interpreted to disclose a "support sheet," the Jarvis reference does not disclose the step of "extruding said covering layer immediately in contact with said support sheet," as recited in claim 1.

The difference between the extrusion technique of the present invention and the injection molding technique of the Jarvis reference is brought out even further in claim 16. This claim recites the step of "feeding said core substrate with said chip in said antenna *through an extrusion die*." The Jarvis reference does not disclose any structure that could be considered to be an extrusion die through which a substrate with the electronics is fed. Claim 16 recites the further step of "extruding a *flowable* material directly onto opposite sides of the core substrate . . . by means of a sheet extrusion technique to thereby form top and bottom layers. . . ." While the resin of the Jarvis reference is injected into the mold cavities while it is in a flowable state, the reference does not teach that the injection occurs by means of a *sheet extrusion technique*. Nor does it disclose that the resin forms top and bottom layers of the smartcard.

For at least the foregoing reasons, therefore, it is respectfully submitted that the Jarvis reference, whether considered by itself or in combination with the Kohama patent, does not disclose the manufacturing methods recited in claims 1 and 16, nor their dependent claims.

A second distinguishing feature of the invention, that was discussed during the interview, relates to the structure of the card that results from the disclosed process. As recited in claim 9, for example, the support sheet has an opening so that, when the top and bottom layers are coextruded, they become joined to each

other in a monolithic fashion. Claim 14 recites, in a similar manner, that the material of the bottom and top layers, together with the material situated in the opening, forms a homogeneous molecular continuity constituting one and the same material.

The Melzer et al patent was relied upon as teaching this feature of the invention. With reference to Figure 2, the patent discloses that the carrier film 8 has cavities or depressions 13 which could be holes in the carrier film. These cavities are filled with the leveling material 14 that is dispensed between the carrier film and each of the top and bottom layers 3 and 4 of the card, during the manufacturing process.

It is respectfully submitted that this teaching does not suggest the subject matter of the claims noted above. First, the leveling material 14 does not form the top and bottom layers of the card. Rather, it is a material that is distinct from the top and bottom layers, and its function is to fill spaces within the interior of the card.

Furthermore, as illustrated in Figure 2, the recesses 13 do not provide continuous passage between the top and bottom layers of the card. Rather, as can be seen, these holes are blocked on the underside of the carrier film 8, by the structure of the module element 5. Consequently, even if the leveling material 14 is constituted of the same material as the top and bottom layers 3 and 4, the top and bottom layers would not be joined to each other in a monolithic fashion.

Accordingly, it is respectfully submitted that the Melzer patent does not suggest the subject matter of claims 9, 14 or 17.

For the foregoing reasons, it is respectfully submitted that all pending claims are patentably distinct from the Jarvis reference, whether considered by itself or in combination with the Kohama and or Melzer patents. Reconsideration and withdrawal of the rejections are respectfully requested.

Respectfully submitted,

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